Airon Wireless products

Airon Wireless system is a series of products which provide you with a good overview of some of your most important health-related data in one application.
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AIRON AGENTURER AS
Øvre Slottsgate 18 - 20
0157 Oslo
NORWAY
Tel: +47 22 41 08 00
www.airon.no

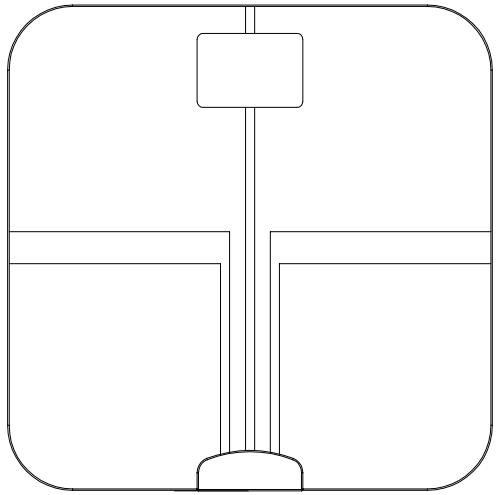
CE

version:1.0

AIRON

User Manual

Airon Wireless Body Analysis Scale



App name: Airon
Model LS 202-B

- Thank you very much for selecting the Airon Wireles Body Analysis Scale LS 202-B.
- Please do read the user manual carefully and thoroughly so as to ensure the safe usage of this product, and keep the manual well for further reference in case you have problems.

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Table of Contents

Safety Information
Safety and Usage Information 2
Your Scale and Its Environment 3
Efficient Use of Your Scale 3
Overview
Device Components 4
LCD Display **5**
Initial Start-Up
General Instructions 6
Insert the Batteries **6**
Install the App and Pair-up 7
Select Measurement Unit 8
Start Measuring
Daily Measurement 9
Data Management
Data Transmission 10
Troubleshooting
Error Prompt 11
When Measuring ... 12
When Data Transmitting... 13
Specifications 14
Maintenance 15
Warranty 15
Appendix
Table of Body Fat Level 16
Table of Body Water Level 16
Health Tips – About Body Fat 16
EMC Guidance 17-20

♥ Safety and Usage Information

The warning signs and symbols are essential to ensure your correct and safe use of this product and protect you and others from injury. Please kindly find the meanings of the warning signs and symbols, which you may encounter in the label and user manual, as follows:

⚠	Symbol for “THE OPERATION GUIDE MUST BE READ”		Symbol for “MANUFACTURER”
Bluetooth SMART	The Bluetooth Combination Mark	CE	Symbol for “COMPLIES WITH MDD 93/42/ECC REQUIREMENTS”
	Symbol for “MANUFACTURE DATE”		Symbol for “ENVIRONMENT PROTECTION – Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice”
SN	Symbol for “SERIAL NUMBER”		
⎓	Symbol for “DIRECT CURRENT”		
	Symbol for “INDOOR USE ONLY”		

⚠ CAUTION

Airon Body Analysis Scale LS 202-B offers you a seamless way to manage your health. Please be aware that this device is designed for adults’ self-measuring and self-monitoring body fat level. Any information provided by this device is in no way meant to treat, cure or prevent any disease or illness from happening. This device should not be used by anyone who is acutely or chronically ill, suffering from a disease or taking medications that affect your water levels. The accuracy of readings for these patients has not been verified. Specific medical advice should be obtained from a physician.

LS 202-B is equipped with data transmission function. It may emit electromagnetic energy so as to perform its intended function. Nearby portable and mobile RF communications equipment can affect the performance of LS 202-B.

Portable and mobile RF communications equipment can affect the measuring accuracy of LS 202-B.

Kindly note that the use of accessories, transducers or cables other than those specified, with the exception of transducers and cables sold by the manufacturer as replacement parts for internal components, may result in increased EMISSIONS or decreased IMMUNITY of LS 202-B.

Be aware that misuse of electrical equipments can cause electric shock, burns, fire and other hazards.

Warning that the LS 202-B should not be used adjacent to or stacked with other equipment.

Manufacturer will make available on request circuit diagrams, component parts list,etc.

WARNING: No modifications of this equipment is allowed.

During using the Analyzer, the patient will contact with the surface and the electrode of the Analyzer. The device doesn’t need to be calibrated in two years lifetime.

This device is contraindicated for any female subject who may be suspected of, or is pregnant. Besides provided inaccurate readings, the affects of this device on the fetus are unknown.

This device is contraindicated for any person who is connected to a wearable or implantable electronic device or instrument such as a pacemaker or defibrillator.

INDICATIONS FOR USE

- The Airon Body Analysis Scale measures weight and uses bio-electrical impedance analysis (BIA) technology to estimate body fat, total body water percentage, bone mass, and muscle mass in generally healthy adults 18 years of age or older.
- It is intended for use in the domestic setting only.

♥ Your Scale and Its Environment

To ensure your safety as well as the service life of your scale, please avoid using the scale under the following circumstances:

- Concurrent use of this device and implantable medical electronic instruments, e.g. Cardiac Pacemaker
- Concurrent use of this device and wearable medical electronic instruments, e.g. electrocardiograph
- Concurrent use of this device and other medical electronic instruments for life support, e.g. mechanical heart
- Slippery floor such as tile floor
- Jumping onto the platform immediately after bath or with wet hands
- Near a cell phone or microwave oven

Avoid storage in the following locations:

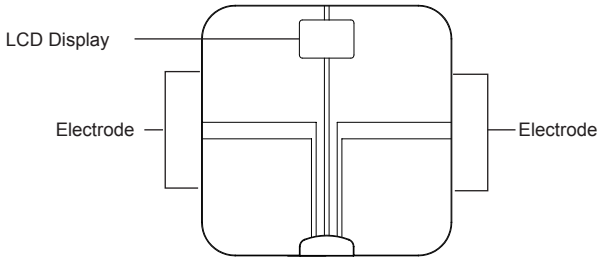
- Where there is water
- Where the device may be exposed to extreme temperatures, humidity, moisture, direct sunlight, dust, or salt air
- Where there is risk of shock or drop
- Where you store chemicals or full of corrosive gases
- Where in reach of the infants or children

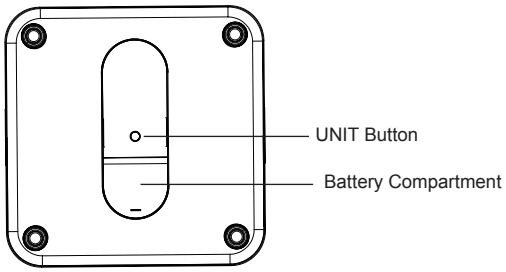
♥ Efficient Use of Your Scale

To ensure the accuracy of measurement, please follow below instructions when you start measurement.

- Place the scale on a flat, hard surface. Soft surface such as carpet will affect the performance of the scale.
- Step onto the platform with bare feet. Stand still and keep full contact with the electrodes until the measurement is complete.
- Start measurement at least two hours after Getting up or Dinning.
- Avoid measurement immediately after strenuous exercise, sauna or bath, drinking, and dinning.
- Always start measurement in the same time slot and on the same scale located on the same flat, hard surface.

♥ Device Components





♥ List

1. Body Analysis Scale LS 202-B
2. Four AAA-size Batteries (1.5V each)
3. User Manual

♥ LCD Display

kg	Kilogram		Data transmitting
st	Stone		Pending to transmit to wireless wellness system
lb	Pound		Low Battery
BIA	Bioelectrical Impedance Analysis		

♥ General Instructions

Airon Body Analysis Scale LS 202-B applies BIA (Bio-impedance Analysis) technology. A small amount of weak current flows through the human body so as to detect the bio-impedance and estimate body fat. The electrical current is small and may not be felt.

This BIA technology is cheap, safe, non-invasive, toxic-free and harmless. It also possesses the characteristics of simple operation and abundant information.

The current mentioned above is less than 1mA. However, please be aware that anyone with an wearable or implantable medical electronic instrument, such as a pacemaker, must avoid using this device.

The intended use of this device is for adult's indoor use only.

♥ Insert the Batteries

- Open the battery door in the back of the scale.
- Insert the batteries (4 x 1.5V AAA) into the battery compartment according to the polarity indications marked inside the compartment.
  * The digits "8888" will be shown on the LCD.

- Close the battery door and wait until the digits "0.0kg" are shown on the LCD.

⚠ CAUTION

- When the symbol appears, the device will power off. Then you shall replace with a new set of batteries. Please replace all four batteries in the same time. Do NOT mix the old batteries with the new one.
- Worn batteries are hazardous waste. Do NOT dispose of them together with the household garbage. Please refer to the local ordinances and recycling instructions regarding disposal of the worn batteries.

♥ Install the App and Pair-Up

With the advanced Bluetooth 4.0 technology applied, the mobile or portable equipments, which are equipped with Bluetooth function in line with BLE Technical Specifications as well as BLP Protocol established by global organization Bluetooth SIG, are capable to receive your personal health data.

Just simply install the specially-designed app and pair up your scale with your mobile or portable equipments. Then you may enjoy the comprehensive health solution provided by Transtek.

- The Airon App is now available in App Store. Search name **"Airon"** Download and install the app. For iPad, also use the iPhone app.
- Turn on Bluetooth and the App. Make sure both are ON when pair-up is proceeding.
- Press and hold "UNIT" button in the back of the scale to start pair-up.

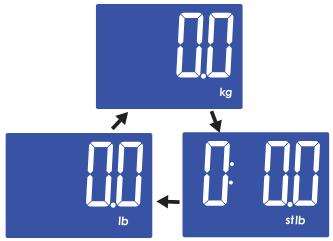
Symbol 0 and symbol 0 will be shown on the LCD alternatively, indicating pair-up is proceeding.

If SUCCEED, symbol [ ] will be shown on the LCD. The scale will then appear in the app. Touch the scale picture, and then you are ready.

If FAIL, symbol "E1" will be shown on the LCD.

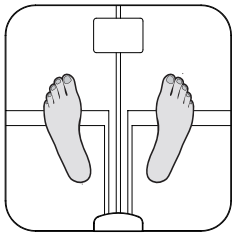
♥ Select Measurement Unit

With batteries correctly installed, press “UNIT” button in the back of the scale to select measurement unit. The default measurement unit is “kilogram”. You may press “UNIT” button to choose among kilogram, stone and pound.

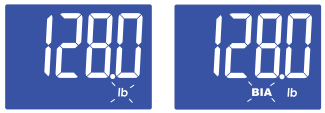


♥ Daily Measurement

・With original SENSE ON patent technology, LS 202-B-B will automatically switch on as you step on the platform barefooted.



・Stand still and keep full contact with the electrodes until the LCD stops blinking “BIA”.



・When your scale is successfully paired with your Smartphone and the Bluetooth is ON, LS 202-Bwill process data transmission automatically.

(*Please refer to Data Transmission for more details.*)

♥ Data Transmission

- With LS 202-B successfully pair-up with your Smartphone, the measurement data will be automatically transmitted to your mobile via Bluetooth.

- The symbol will disappear after successful data transmission, and you may check your personal health data stored in your Smartphone.

- If the data transmission fails, the symbol will remain. The pending measurement data will be temporarily kept in the scale and transmitted to your Smartphone when next measurement is complete.

	Data transmitting
	Data ready to transmit to the App: -If SUCCEED, the symbol disappears; -If FAIL, the symbol remains.

♥ Error Prompt

Error	Description	Solution
	Overload. The device will power off.	Stop using this scale for measurement.
	Low Battery. The device will power off.	Replace all four batteries in the same time. Please purchase the authorized batteries for replacement.
	Failure of pairing up.	Please check below items: -Bluetooth is ON. -App Collector is ON. -Both devices are within the transmission distance of Bluetooth.

♥ When Measuring ...

Problem	Root Cause	Solution
Abnormal measuring results: - Too high; OR - Too low; OR - Huge difference between two recent measurement.	Incorrect posture	Please step on the platform barefooted and stand still.
	The device is located on the soft ground such as a carpet OR on a rugged surface.	Please place the device on a flat, hard surface.
	Cold body that may results in bad blood circulation.	Warm up your hands and feet to resume blood circulation and then measure again.

Problem	Root Cause	Solution
Abnormal measuring results: - Too high; OR - Too low; OR - Huge difference between two recent measurement.	Cold Electrodes.	Place the device in a warm room for a while and then measure again.
	Either your hands or your feet are too dry.	Wipe your feet with a damp cloth, keeping them slightly damp when starting measurement.
No display on LCD when the device powers on.	Batteries not yet installed.	Install the batteries. (Please refer to Insert the Batteries)
	Worn batteries.	Replace all four batteries in the same time. Please purchase the authorized batteries for replacement.
CANNOT proceed to analyze body fat.	Step onto the platform wearing socks or shoes.	Please keep barefooted during the measurement, and keep full contact with the electrodes as well.
The device powers off automatically.	Low battery.	Replace all four batteries in the same time. Please purchase the authorized batteries for replacement.

♥ When Data Transmitting ...

Problem	Root Cause	Solution
Data transmission failed.	Bluetooth is OFF.	Turn ON the Bluetooth via “Setting >> General >> Bluetooth”.
	The App is OFF.	Press the icon to turn ON your app.
	Out of range of Bluetooth transmission.	Place your Smartphone closer to the scale.

♥ Specifications

Product Name	Airon Wireless Body Analysis Scale (LS 202-B)
Dimension	Scale: 321 x 321 x 28.5mm
Net Weight	Approximately 1.98kg (Excluding the dry cells)
Display	Blue LCD with White Backlight
Measurement Unit	Kilogram / Stone/ Pound
Measurement Range	5kg to 200kg / 0st: 11lb to 31st: 7lb / 11lb to 441lb
Division	0.1kg / 0.2lb
Accuracy	0-50kg: ±0.3kg; 50-100kg: ±0.4kg; 100-150kg: ±0.5kg; 150-180kg: ±0.7kg
Working Environment	Temperature: 0℃ to 40℃ Humidity: ≤90% RH
Storage Environment	Temperature: -20℃ to 60℃
Power Source	6V (Four AAA-size Batteries)
Turn on Method	SENSE ON technology
Auto-OFF	The scale will turn off after about 10 seconds if there is no operation
Accessories	1. Four AAA-size Batteries 2. User Manual
Mode of Operation	Continuous Operation

About the Accuracy of This Product

• This product passes strict inspection before delivery and therefore its accuracy is guaranteed by the manufacturer. Please refer to the above table for the descriptions on accuracy.

• This product is specially designed for body fat analysis as well as weight measurement. It should NOT be used by anyone during the process of transaction for verification of goods' weight.

♥ Maintenance

When carrying out usual maintenance, please ensure practice of the following Do's and Don'ts:

- DO use a dry soft cloth to wipe the dust.
- DO use a wet soft cloth, dipped into water and wrung out, to wipe the dirt. Then use a dry soft cloth to dry up the device.
- DON'T wash the device with water or immerse it in water.
- DON'T use propellant, abrasive or other chemicals to wipe the dirt in avoidance of discolor or malfunction.
- DON'T disassemble this device.
  (*Please refer to Warranty for contact information*)

♥ Warranty

- Airon warrants its products free of defects in materials and workmanship in normal use for a period of TWO years from the date of retail purchase.
- This warranty does NOT cover damages caused by misuse or abuse, including but not limited to:

→ Failure caused by unauthorized repairs or modifications;
→ Damage caused by shock or drop during transportation;
→ Failure caused by improper operation inconsistent with the instructions stated in this user manual;
→ Malfunction or damage from failure to provide the recommended maintenance;
→ Damage caused by improper use of power supply.

AIRON AGENTURER AS
Øvre Slottsgate 18 - 20
0157 Oslo
NORWAY
Tel: +47 22 41 08 00
www.airon.no

♥ Table of Body Fat Level (Unit: %)

Age	Man / Sportsman				Woman / Sportswoman			
	Low	Normal	High	V. High	Low	Normal	High	V. High
20-29	<13	13.1-20	20.1-23	>23	<19	19.1-28	28.1-31	>31
30-39	<14	14.1-21	21.1-24	>24	<20	20.1-29	29.1-32	>32
40-49	<16	16.1-23	23.1-26	>26	<22	22.1-30	30.1-33	>33
50-59	<17	17.1-24	24.1-27	>27	<23	23.1-31	31.1-34	>34
60+	<18	18.1-25	25.1-28	>28	<24	24.1-32	32.1-35	>35

♥ Table of Body Water Level (Unit: %)

Gender	Body Fat Percentage Range	Optimal Total Body Water Percentage Range
Men	4-14	70-63
	15-21	63-57
	22-24	57-55
	≥25	55-37
Women	4-20	70-58
	21-29	58-52
	30-32	52-49
	≥33	49-37

Source: Derived fr. Wang & Deurenberg: “Hydration of fat-free body mass”. American Journal Clin Nutr 1999, 69833-841

♥ Health Tips - About Body Fat

Fat is essential for human body. It can not only store energy and protect viscera, but also regulate body temperature and maintain normal physiological function of human body. However, too much body fat is harmful to human body. It is always accompanied by Fatty Liver, diabetes, coronary heart disease, etc.

Therefore self-measuring and self-monitoring body fat level are beneficial to your health. Since we can’t judge body fat level simply by our weight, this body fat analyzer LS 202-B, with BIA (Bio-impedance Analysis) technology applied, is an accurate device that offers a quick and comfortable way to obtain your body fat level.

♥ EMC Guidance

Table 1 – Guidance and MANUFACTURER’S declaration – ELECTROMAGNETIC EMISSIONS for all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacturer’s declaration – electromagnetic emissions		
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment-guidance**
RF emissions CISPR 11	Group 2	The device must emit electromagnetic energy in order to perform its intended function. Nearby electronic equipment may be affected.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

Table 2 – Guidance and MANUFACTURER'S declaration – electromagnetic IMMUNITY – for all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacturer's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
IMMUNITY test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0,5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 s	Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the device requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE U_T is the a.c. mains voltage prior to application of the test level.			

Table 4 – Guidance and MANUFACTURER'S declaration – electromagnetic IMMUNITY – for ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
IMMUNITY test	**IEC 60601 TEST LEVEL**	**Compliance level**	**Electromagnetic environment – guidance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	Not applicable	Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = [\frac{3,5}{V_1}]\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	$d = 1.167\sqrt{P}$ 80 MHz to 800 MHz $d = 2.333\sqrt{P}$ 800 MHz to 2,5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol:
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the device.

b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [V_1] V/m.

Table 6 – Recommended separation distances between portable and mobile RF communications equipment and the ME EQUIPMENT or ME SYSTEM – for ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment and the device			
The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	**Separation distance according to frequency of transmitter** m		
	150 kHz to 80 MHz $d = [\frac{3,5}{V_1}]\sqrt{P}$	**80 MHz to 800 MHz** $d = 1.167\sqrt{P}$	**800 MHz to 2,5 GHz** $d = 2.333\sqrt{P}$
0,01	Not applicable	0.117	0.233
0,1	Not applicable	0.369	0.738
1	Not applicable	1.167	2.333
10	Not applicable	3.690	7.378
100	Not applicable	11.67	23.33
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			